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Sampling the Media Habits of a Shakespeare Company: Testing a Software Prototype in Rehearsal

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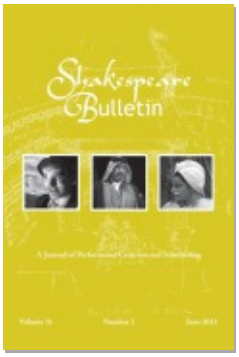

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Sampling the Media Habits of a Shakespeare Company: Testing a Software Prototype in Rehearsal

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The dotcom ethos of "living in beta"—not just tolerating but participating in ongoing media change—is one that most scholars and practitioners in the arts and humanities resist. At the turn of the 21st century, professions dedicated to cultural conservation in a deep sense have depended on highly stable technologies, such as the codex, for a very long time. Theatre professionals might seem to be the exception to this rule. From one familiar performance studies perspective at least, live theatre is an art that: "becomes itself through disappearance" (Phelan, 146). The rehearsal practices of modern western playing companies exemplify judicious management of change, emergence, and accident. In one sense, then, theatre companies have always "lived in beta." Like software developers, theatre companies launch early and adjust downstream. Like beta software releases, the theatre previews that follow the developmental phase of rehearsals provide for early audience feedback and correction. Software developers, for their part, also pursue a highly iterative practice in advance of their releases: involving intensive verbal refinement of shared goals and line-by-line scrutiny of tasks, or "stories," as they strive to hit the mark with computer code that performs those stories. In both communities of practice, phases of closed craft-in-process are succeeded by phases of direct feedback from their target audiences.

A week of rehearsal observation in the service of software development affirmed these theoretical parallels. It also corrected some false assumptions about what those parallels imply for the media habits of working theatre professionals. What follows is a brief account of the testing process for an app prototype, a mobile script tool with the working title "MyShx," that took place over the spring and summer of 2012,

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at the American Shakespeare Center (ASC) in Staunton, VA. We are grateful to the ASC and its company members for their generous time and feedback. Their rehearsals illuminate the heterogeneous practices of professionals dedicated to the discipline and pleasure of an essentially unstable medium, working at a moment when our technologies of expression (and the communications infrastructure supporting them) are themselves remarkably unstable.

The MyShx prototype

MyShx is a proof-of-concept for a mobile prompt-book designed to serve the collaborative needs of theatre practitioners—professionals and amateurs, teachers and students—in rehearsal. As principal investigators (PIs) in this project, Bruce R. Smith of the University of Southern California and Katherine Rowe of Bryn Mawr, worked with members of the American Shakespeare Center and developers at Bawtree Software, in British Colombia, to design a prototype that could be tested in theatre production. Digital development was supported with funding from the NEH Office for Digital Humanities, the Dornsife College of Letters, Arts and Sciences at the University of Southern California, and the Tri-College Digital Humanities Initiative at Bryn Mawr, Haverford, and Swarthmore Colleges. Cambridge University Press provided a digital version of the New Cambridge Shakespeare edition of *Cymbeline*, as the pilot text for this trial. USC retains ownership of the software code and will make that code (but not the play text) available at the end of the grant period on an open source license.

The project was sparked by the PIs' discovery during research for a digital Shakespeare Encyclopedia that relatively few digital resources have been developed specifically for working theatre companies. Moreover, few digital humanities initiatives explore the media habits and practices of artists. Even fewer begin with a thoroughgoing beta test in a community of target users. Modern theatre scripts offer complex and illuminating translation cases from traditional print practices to digital practices. A working Shakespeare script, in particular, exemplifies key challenges of "co-created content" that preoccupy digital entrepreneurs today, in academia as well as in industry. Where content that is owned (a published edition) undergoes complex transformations in its uses, by multiple users (in this case actors and other theatre professionals), digital media intensify any existing questions around intellectual property, archiving and re-use. This is especially true when those transformations also make available for

recording, distribution, or archiving, textual practices that had previously not been robustly documented and circulated: such as script edits, director's notes, line notes, blocking plans, and so on. Yet one of the chief benefits of digital technologies for both scholars and artists is precisely that they have the potential to create archivable traces of working theatre processes. The exhilarating prospect of the individual and heterogeneous theatre process archived—and its benefits for both scholars and artists—animated this prototyping initiative. The project sought to establish the necessary features of a robust electronic prompt-book and to understand whether an electronic script might serve as an interface for such a future archive. Would working theatre companies benefit from—and be willing and able to circulate—the electronically-captured results of their rehearsal processes?

MyShx is a simple, limited, iPad prototype designed to answer these questions in a preliminary way. It focused on key aspects of the current media habits of actors, directors, dramaturges and designers and was intended to establish whether tablet devices are at a robust enough stage of development to support the complex recording, mnemonic, communication, and performance tasks of a play in production. If so, what are the essential features of a mobile script and what downstream challenges of archiving, distribution and intellectual property might they spark? Questions we had not anticipated surfaced during development and testing, including some key questions about the sustainability of a mobile app for theatre production.

The prototype app includes a full script adapted by the ASC production team from a scholarly text of *Cymbeline* (Figure 1). A Director's version includes an editing environment that makes every element of the playtext freely adjustable (Figure 2 shows the script at an early phase of play production). An export tool allows the Director to share changes with actors and designers in real time and to archive each version of the script in PDF format. An annotation tray includes editorial notes and glosses, private note-taking; and shareable comments for Director's notes and line notes (Figure 3). A simple highlighting tool isolates an actor's part or parts, including any notes associated with them (Figure 4). The app uses iOS-native touch, swipe, and tap commands, a virtual keyboard, and dictionary (very useful as it turned out for paraphrasing during table work). Annotations or edits are entered with the iPad's virtual keyboard.

Over the summer of 2012 the cast and staff of ASC's 2012 production of *Cymbeline* tested the prototype over the life cycle of a play in production, providing feedback on its strengths and limitations and clarifying

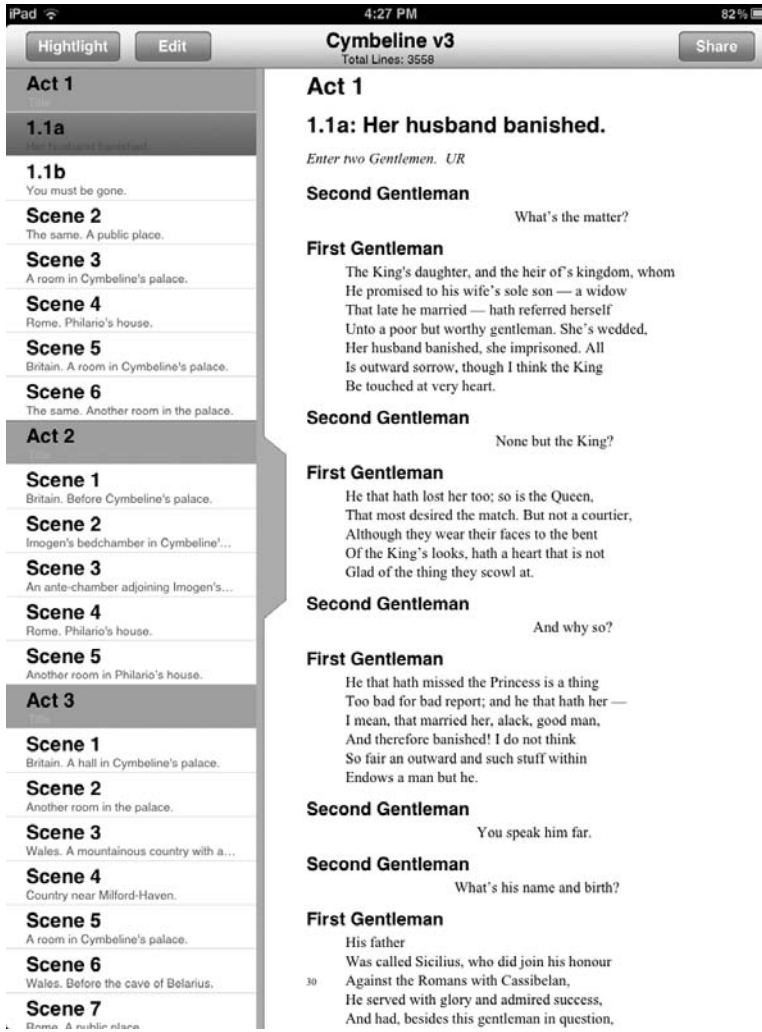

Fig. 1.

our vision of what a mobile script and prompt-book should offer. The ASC team were provided with iPad2s (16G with Wi-Fi) loaded with the prototype script app adapted from the NCS *Cymbeline*, as well as PDFs and a print version of that edition, for comparison. Cambridge University Press provided free access for the duration of production to its complete Shakespeare resources, via *Cambridge Collections Online*. We asked the company to record how things were working for them, using a simple web-based survey once a week. During our week of rehearsal observa-

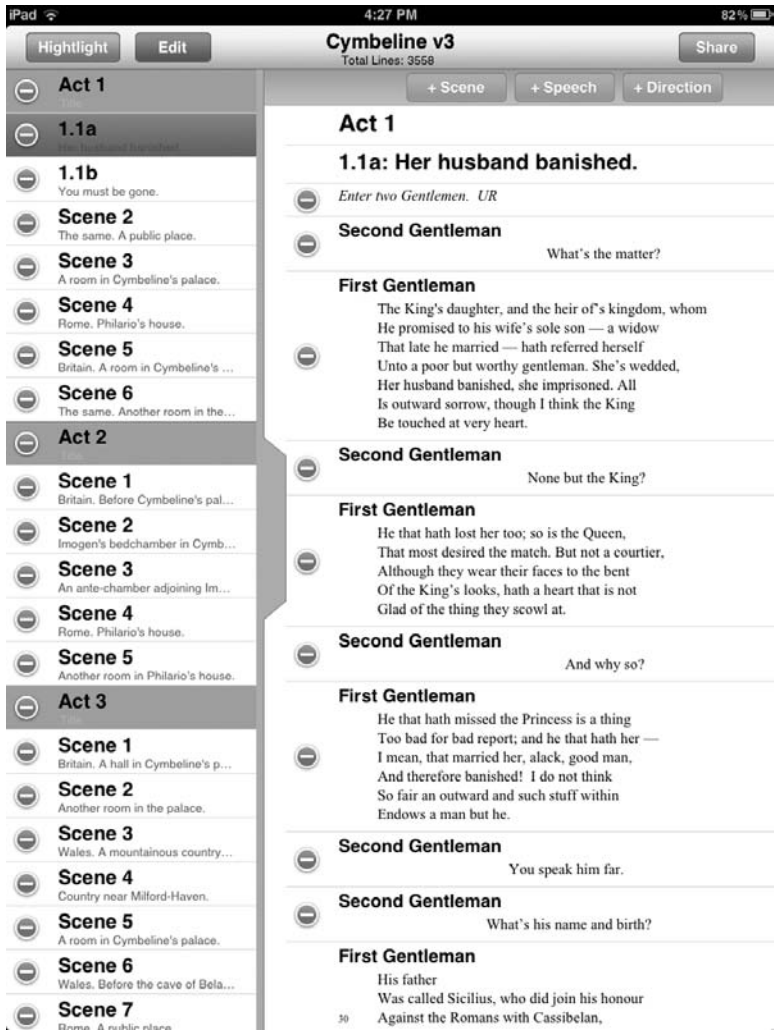

Fig. 2.

tions we gathered informal feedback and interviewed a subset of users at some length about their working process with and without the prototype.

Medium-agnostic early discarders

Among the findings of this trial, two characteristic qualities of the ASC testers (a sample size of fifteen) stood out. This is a playing company invested in original-staging practices on its audience-facing side.

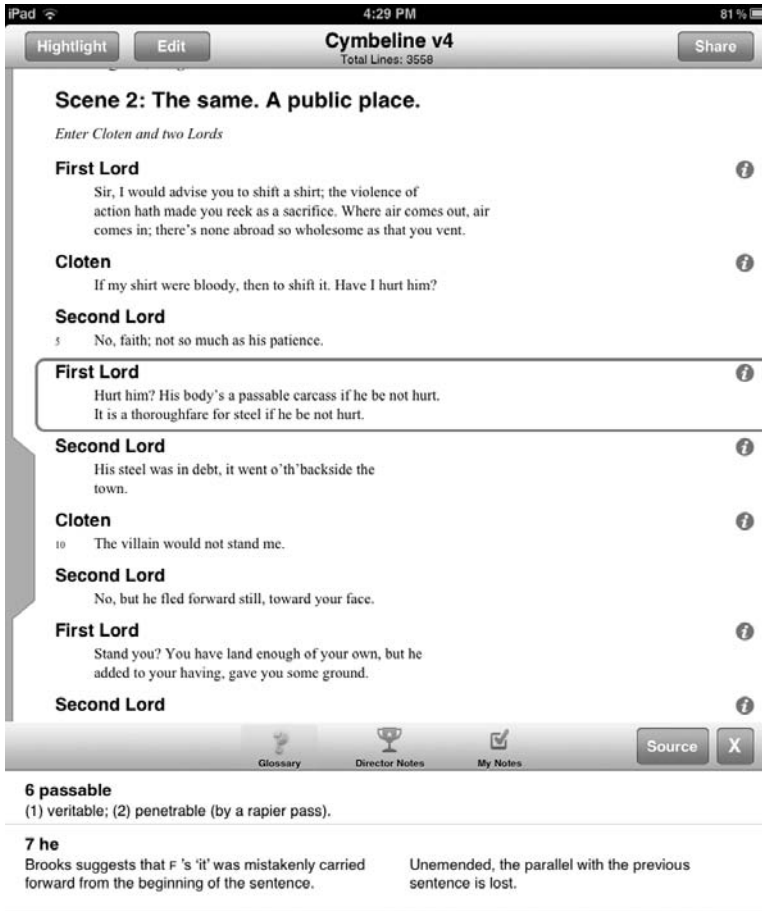

Fig. 3.

Yet on its production side this user community is strikingly medium-agnostic (at least for productions that, like this one, are not part of their annual Actor's Renaissance Season). During a week dedicated primarily to table-work and the preparation of stage-fighting, texts were handled and accessed via a very wide array of tools: smartphones; tablets; laptops; pen, pencil, pads, notebooks; print editions and reference books of various dates; binders with printed materials that were prepared electronically; pdfs; digital facsimiles; and our prototype. (Even excluding the iPads provided for this trial, this is a user community with a strong bias towards Apple devices). Surprisingly (to a scholar), even with so many personal mobile devices in the room we observed no systematic consultation of

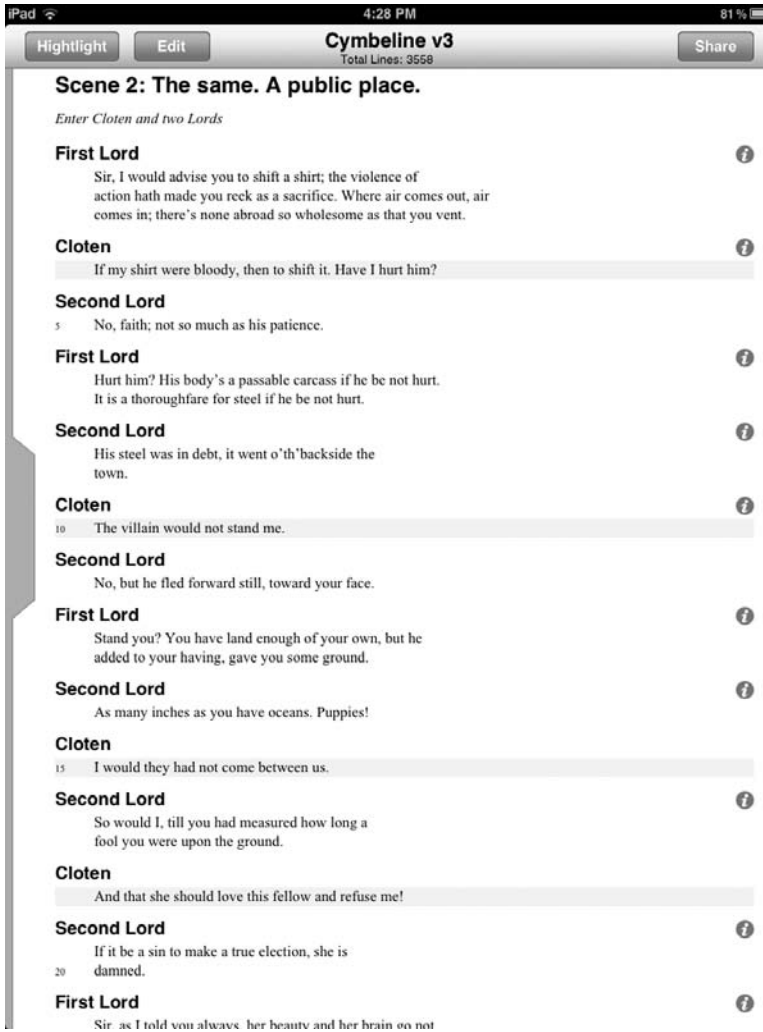

Fig. 4.

online reference resources to answer points of information during table work (for questions such as: "Where else does Shakespeare use 'musics' as a generic noun?"). Given the time-constraints of rehearsal— the need to move through designated scenes in a fixed period of time—such [re] searches presumably need to be deferred to other work periods, or forwarded to the dramaturge.

Unsurprisingly, given the restrictions of Actor's Equity, we observed no video recording: no video whatsoever was used to either document

rehearsal, or as a rehearsal tool. We learned of one regular but restricted application for recorded audio. The ASC has a short rehearsal window for productions and expects its very experienced actors to arrive nearly off-book. Some actors used the "voice memo" feature on their smartphones to record their scenes and then play them back, a procedure that turned out to be a highly-effective self-cuing strategy. Those who had learned their lines in this way showed fuller command of the play as a whole (including the lines of other players) and required less prompting than those who did not. The multi-modal "scripts" these audio-recorders memorized thus fall somewhere between a full playtext and a cue script.

If the ASC troupe is representative, theatre professionals are a user community of early discarders. Open to experimenting with digital tools, they have high standards for the technology they use and little patience for things that do not work. Though their own working process is iterative, they don't welcome living in beta when it comes to their text technologies. With hindsight, this makes good sense; to pursue a craft of entropy on stage in a focused way, it helps to have a relatively high level of stability and consistency in one's material resources.

For the trial, this meant that technical aspects of the prototype that might appeal to a literary scholar turned out to be particularly annoying for an actor. For example, every textual "object" in the MyShx prototype (a stage direction, speech, character name, scene division, etc.) is editable at all times. For that reason, as a user scrolls through the text, the screen "populates" the text with a slight but discernable lag, while the app checks the server for any changes. All of the actors found this literal instability displeasing and frustrating. A text that becomes itself through appearance or disappearance—reminding us that it is being performed *now* by a user interface—may intrigue and even delight scholar-users (as it has at three conference demos); yet those phenomena were merely disruptive to our actor testers.

A mobile prompt-book

The ways ASC actors and directors handled texts in rehearsal suggested several design principles for future development. For two of these, mobile devices still fall behind the current blend of print, paper, pen and social networking technologies; for two others, they offer the potential for new best practices.

- *One-handedness*: the dominant text operations in rehearsal were one-handed. A player holds the text with one hand; with the other she

gestures, counts iambs, takes notes, pages/scrolls, etc. Hand-strap cases are essential and make a tablet a little easier to manipulate than a ring binder with a script but still harder to handle than a pocket book edition of the play.

- *Speed*: time is of the essence in the theatre and actors and directors work through texts extremely quickly. Their notes will be marginal jottings or, in the case of the Director, frequently verbal instructions to an amanuensis (in this production, the Stage Manager), who can record them at more length while rehearsal continues. The iPad's virtual keyboard was painfully slow for annotation and full-scale editing. Stylus, finger annotation, and ideally audio notes are essential features of a really usable script app. And the operating standard remains the efficiency of pencil on paper.
- *Text manipulation*: real-time editing did turn out to be quite valuable, as lines were cut or restored during rehearsal. We had assumed that the ability to alternate between cue scripts and the main script would be equally important to actors; in the end, our development funds extended only to a simple highlighting function that allowed actors to focus on their own part. Interestingly, we found a surprisingly wide variation from actors concerning the degree to which they used the whole play text in role development and line learning. We were reminded that the current practice of providing actors with the whole play text and a separate cue script is still relatively recent. Through the early twentieth century, actors worked with their part alone (Palfrey and Sterne 1–39). For some actors working now, the part alone remains the crucial resource; others work from the full script almost exclusively (as did the ASC Director); as noted above, the ASC company includes a third player population, the audio-prompters who work with full text of their own scenes.
- *A personal prompt assistant*: a really robust digital prompt book would have built into it a capacity for actors to record lines and play back only their cues, like that of a smart-phone's voice memo function. In an ideal world, a personal digital assistant like Siri would listen, pace the cues, prompt on request ("prithee?"—the request ASC actors use when they ask the prompter for help) and supply immediate line notes (the voice command: "Siri, listen to this speech and correct me when I use the wrong word" leading to the response: "OK, in line four you used the word 'music' but the correct word is 'musics'.") Technological solutions for such demands exist now; time and resources are all it would take to implement such an actor's tool.
- *Iteration*: the most significant challenges in current practice, given the extant tools and constraints on recording, involve collecting and sharing among the company the myriad ongoing adjustments that happen during rehearsal. The ASC uses a digital project-management tool

> (the communications environment Basecamp) for sharing director's notes and line notes, blocking adjustments, and so on. But these are not currently archived in a technologically robust way, thereby making it hard to drop an understudy into a scene by handing her a history of adjustments, or for a Director to observe behaviors over time. Directors and Stage Managers would be interested in being able to track and mine annotations in order to gather data on textual or dramaturgical moments that consistently generate line notes. Actors would likewise be interested in patterns in the lines they tend to miss. In theory, an electronic script could be a wonderful resource for generating such information during rehearsal—a textual mode of recording that does not run afoul of Actor's Equity (at least for now).

What's next?

Understanding the intellectual property questions raised by theatre scripts. This work is ongoing and will be completed by the end of the grant period. At its conclusion we will publish a white paper detailing archiving and distribution constraints industry participants identify for electronic scripts. Understanding these is the crucial first step towards preservation policies that provide for collaboration between companies, or for the development of future performance histories. A digital archive of script cuts and annotations might be built around the server side of an app, should users wish that, allowing performance historians to study, say, the versions of *Cymbeline* produced in the UK and US between 2010 and 2013. The same technologies would allow contemporary companies easily to share a particular two-hour cut of the play, should they wish to. That would mean opening up some aspects of theatre process that are currently closed as a rule.

Sustainable development. Experienced theatre professionals bring feedback skills honed over years of careful iterative work in the emergent environments of rehearsal. A week of observation at ASC generated detailed, concrete use cases of a kind that is rare in digital humanities initiatives. These use cases would make it possible to build out a full promptbook that meets the user needs and aesthetic standards of theatre professionals. Yet unlike print editions, electronic texts require ongoing maintenance and updating. In the case of a mobile app for theatre professionals, they are likely to require this with every operating system release—because a user community of early discarders may be expected to abandon it at the first glitch. The challenge of sustainable development is going to be

the key issue confronted by any funding agency or publisher seeking to develop digital tools dedicated to theatre use. It will require bridging the interests of arts practitioners, the scholars who study their work, and the entities (commercial and not-for-profit) who design, sell, or make freely available the resources on which those two populations depend.

In a larger sense, this week of rehearsal observations underscored in concrete and thorough ways the arbitrariness of any ontological separation between performance event and the host of iterative documentary practices involved in the production of live theatre. From the perspective of rehearsal, live theatre is a richly remediated practice.

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